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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/798,483

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Toshiyuki Nagaoka

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EXAMINER

NGUYEN, LUONG TRUNG

ART UNIT

PAPER NUMBER

2622

MAIL DATE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/798,483	<b>Applicant(s)</b> NAGAOKA, TOSHIYUKI	
	<b>Examiner</b> LUONG T. NGUYEN	<b>Art Unit</b> 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,8-11 and 13-25 is/are pending in the application.
- 4a) Of the above claim(s) 3,5,9,10,13-15,17 and 19-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,6,8,11,16,18,23-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/11/2008 has been entered.

### ***Election/Restrictions***

2. Applicant's election of Species X (Figure 10) in the reply filed on 06/04/2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

3. Claims 3, 5, 9, 10, 13, 14, 15, 17, 19-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species, there being no allowable generic or linking claim.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1, 4, 6, 8, 11, 18, 23-25 filed on 9/11/2008 have been considered but are moot in view of the new ground(s) of rejection.

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5. The allowable of claim 16 has been withdrawn due to newly founded reference.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 4, 6, 8, 11, 16, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stoneham (US 4,801,958) in view of Ogino et al. (US 6,864,910).

Regarding claim 1, Stoneham discloses an imaging apparatus comprising;

an imaging element (exposure plane 11', figure 2, column 2, lines 43-67),

plural optical systems having different focal lengths (lens 1' and lens 3', figure 2, column 2, lines 43-67),

a variable-transmittance element (combination of mirror 7' and aperture plane defining plate 17', figure 2, column 2, line 43 – column 3, line 36),

a reflective optical element consisting essentially of a reflective surface that is fixedly positioned (mirrors 5' is a fixed mirror, figure 2, column 2, lines 43-67).

Stoneham fails to specifically disclose wherein a focal length of the imaging apparatus in its entirety is changed by controlling transmittance of the variable-transmittance element, and wherein the variable-transmittance element is free from any portion that is mechanically displaced in a photographing action. However, Ogino et al. discloses an optical apparatus, which comprises liquid crystal elements 102 and 105, the liquid crystal elements 102 and 105 are

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disposed in front of lens 108 and 113 along its optical path, respectively. The liquid crystal elements 102 and 105 are alternately driven between a transmissive state and non-transmissive state (figure 1, column 8, lines 18-65) by liquid crystal control circuit 123. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Stoneham by placing two liquid crystal elements as taught by Ogino et al. in front of lens 1' and 3' of Stoneham camera in order to obtain a dual lens camera having capability of selecting a desired lens system without using mirror 7'. Doing so, the size of the camera is reduced.

Regarding claim 4, Stoneham discloses wherein each of the plural optical systems is arranged to be used with the imaging element (lens 1' and lens 3' are corresponding to the exposure plane 11', figure 2), and a center of an imaging area of the imaging element is substantially aligned with the optical axes of the plural optical systems (the center of the exposure plane 11' is aligned with the optical axis Z', figure 2).

Regarding claim 6, Stoneham discloses wherein the imaging apparatus has at least one optical element with reflective function, wherein the at least one optical element with the reflective function is configured so that an amount of light transmitted therethrough and an amount of light reflected therefrom are substantially equal (mirror 5' and mirror 7', each has reflective function, figure 2).

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Regarding claim 8, Stoneham discloses the plural optical systems and the variable-transmittance element are arranged closely (lens 1' or lens 3', the mirror 7' and aperture plane defining plate 17' are arranged closely, figure 2).

Regarding claim 11, Stoneham discloses wherein the variable-transmittance element has a transmittance distribution (column 2, line 43 – column 3, line 47).

Regarding claim 16, Stoneham discloses an imaging apparatus comprising;  
an imaging element (exposure plane 11', figure 2, column 2, lines 43-67),  
plural optical systems having different focal lengths (lens 1' and lens 3', figure 2, column 2, lines 43-67),  
a variable-transmittance element (combination of mirror 7' and aperture plane defining plate 17', figure 2, column 2, line 43 – column 3, line 36),  
a reflective optical element consisting essentially of a reflective surface that is fixedly positioned (mirrors 5' is a fixed mirror, figure 2, column 2, lines 43-67).

Stoneham fails to specifically disclose a display part for checking a photographing state, an operation part for choosing a desired focal length, a control part for controlling the transmittance of the variable-transmittance element using a signal generated from the operation part, and a power supply part for supplying electric power to the variable-transmittance element and the control part, wherein a focal length of the imaging apparatus in its entirety is changed by controlling transmittance of the variable-transmittance element.

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However, Ogino et al. discloses an optical apparatus, which discloses a display part (view finder 3, figure 1) for checking a photographing state, an operation part (lens microcomputer 127, figure 1) for choosing a desired focal length, a control part (liquid control circuit 123, figure 1) for controlling the transmittance of the variable-transmittance element using a signal generated from the operation part, and a power supply part is included in the optical apparatus for supplying electric power to the variable-transmittance element and the control part. The optical apparatus in Ogino et al. also comprises liquid crystal elements 102 and 105, the liquid crystal elements 102 and 105 are disposed in front of lens 108 and 113 along its optical path, respectively. The liquid crystal elements 102 and 105 are alternately driven between a transmissive state and non-transmissive state (figure 1, column 8, lines 18-65) by liquid crystal control circuit 123. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Stoneham by placing two liquid crystal elements as taught by Ogino et al. in front of lens 1' and 3' of Stoneham camera in order to obtain a dual lens camera having capability of selecting a desired lens system without using mirror 7'. Doing so, the size of the camera is reduced.

Regarding claim 25, Ogino et al. discloses wherein the variable-transmittance element comprises a liquid crystal element (liquid crystal elements 102, 105, figure 1, column 8, lines 45-64).

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stoneham (US 4,801,958) in view of Ogino et al. (US 6,864,910) further in view of Ise et al. (US 5,471,339).

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Regarding claim 18, Stoneham and Ogino et al. fail to disclose wherein the transmittance of the variable-transmittance element, which has been controlled for a photographing action, is reset to an initial state after the photographing action is completed. However, Ise et al. teaches the using of an electrochromic diaphragm 10 in an image pickup lens system 20 (figures 1, 3) for controlling the volume of light transmission of the light incident on CCD sensor 26. The light transmitting properties are changed by applying an electrical voltage onto electrochromic element which corresponds to reset a transmittance control to an initial state (column 1, lines 13-35; column 3, lines 30-50). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Stoneham and Ogino et al. by the teaching of Ise et al. in order to control volume of light transmission for the entire range of the visible light (column 1, lines 33-35).

9. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stoneham (US 4,801,958) in view of Ogino et al. (US 6,864,910) further in view of Rahim (US 5,155,683).

Regarding claim 23, Stoneham and Ogino et al. fail to disclose a mobile article equipped with the imaging apparatus according to claim 1. However, Rahim discloses vehicle V (mobile article) is equipped with camera 30 (imaging apparatus), which includes a variable-focal-length zoom lens as shown in figures 2, 5, column 6, lines 51-60, column 14, lines 65-68. Therefore, it would have been obvious to one of ordinary skill at the time the invention was made to modify the device in Stoneham and Ogino et al. by the teaching of Rahim in order to allow an operator views a scene at a remote location.



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10. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stoneham (US 4,801,958) in view of Ogino et al. (US 6,864,910) further in view of Yoshioka et al. (US 2001/0005232).

Regarding claim 24, Stoneham discloses wherein the imaging apparatus has plural reflective surfaces (mirrors 5' and 7', figure 2, column 2, lines 43-67), and one of the reflective surfaces has reflective function (mirror 5' has reflective function, figure 2) and another of the reflective surfaces has reflective function (mirror 7' has reflective function).

Stoneham and Ogino et al. fail to disclose another of the reflective surfaces has reflective function and transmitting function. However, Yoshioka et al. discloses a digital camera comprises a liquid crystal semi-transparent mirror 22, which has transmitting function and reflective function, figure 3, paragraphs [0043] - [0045]). Therefore, it would have been obvious to one of ordinary skill at the time the invention was made to modify the device in Stoneham and Ogino et al. by the teaching of Yoshioka et al. in order to obtain an imaging apparatus, which simplifies light splitting device, rendering it more compact, and achieving low power consumption, paragraph [0043]).

### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUONG T. NGUYEN whose telephone number is (571) 272-7315. The examiner can normally be reached on 7:30AM - 5:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID L. OMETZ can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L.T.N/  
11/23/08

/LUONG T NGUYEN/  
Examiner, Art Unit 2622